April 25, 2001 Supersedes October 26, 1999 Matls. I.M. 453.09

# CONCRETE ANCHORS APPROVED MANUFACTURERS AND BRANDS

Acceptance of concrete anchors shall be on the basis of certification from an approved manufacturer and approved brand names. Approval of concrete anchors shall be based on pull-out loads. Maximum loads shall not exceed 1/3 of the values.

When galvanized anchors are specified zinc coating shall be applied by either hot dipped galvanizing to meet the requirements of ASTM A153 class C or mechanically galvanized to meet the requirements of ASTM B 695, class 50 type 1.

Approved manufacturers, approved brand names and the pull-out loads for each brand is listed in Appendix A. Pull-out test loads shall be in accordance with ASTM E488 using MPA (4000 psi) compressive strength concrete.

Appendix B contains manufacturer brochures of individual approved brand names listing installation instruction, anchor sizes, embedment depth, spacing requirements, edge distance required to obtain maximum pull-out (working) loads, etc...

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Appendixes A & B are divided into sections as to manufacturers and brand names as listed below:

# 1. HILTI, INC.

Anchor Type: Kwik Bolt II Carbon Steel Stud Anchor, Kwik Bolt II AISI 304 & 316 Stainless Steel Stud Anchor, HDI Flush Anchor Drop-In, HDI Stainless Steel Flush Anchor Drop-In, HILTI HVA Adhesive Anchor with HAS Rods, HSL Metric Heavy-Duty Expansion Anchor

#### 2. ITW RAMSET/RED HEAD ANCHORS

<u>Anchor Type:</u> Carbon and Stainless Steel Trubolt Wedge, Carbon and Stainless Steel Dynabolt Sleeve (Hex Nut Head Style), Carbon Steel Multi-Set II Drop-In, Self-Drill, Stud Anchor, Non-Drill

#### 3. THE RAWL COMPANY, INC.

<u>Anchor Type:</u> Carbon Steel Flat Head Rawl-Bolt, Stainless Steel Hex Head Rawl-Bolt, Stainless Steel Rawl-Stud, Rawl Lok/Bolt, Rawl Multi-Calk

### 4. STAR EXPANSION COMPANY

Anchor Type: Drop-Grip Anchor, Steel Anchor, Wedge-Grip Anchor

#### 5. WEJ-IT

<u>Anchor Type:</u> Ankr-Tite Stud Anchor, Sleeve Anchor (Hex Nut Head, Rod Coupling Head), Drop-In Anchor, Chemical Mortar Cartridge

### 6. U.S. ANCHOR CORPORATION

Anchor Type: Kingpin Wedge Anchor

## 7. CEB CORPORATION

Anchor Type: Wedge Stud, Interplug Drop-In Anchors

#### 8. SIMPSON STRONG-TIE COMPANY, INC.

Anchor Type: Drop-In Anchor, Polly-All Epoxy Anchoring System, Wedge-All Stud Anchor

#### 9. COBRA ANCHORS CORPORATION

Anchor Type: Parabolt Concrete Anchors

### 10. GLOBAL DISTRIBUTING, INC.

Anchor Type: Sanco All Anchor T Type, Y Type, C Type, CS Type, CT Type